

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims.

1. (Original): An isolated polynucleotide comprising a polynucleotide having at least 95% identity to a member selected from the group consisting of:

- (a) a polynucleotide encoding a polypeptide comprising amino acid 1 to 69 of SEQ ID NO: 2;
- (b) a polynucleotide encoding a polypeptide comprising amino acid 1 to 69 of SEQ ID NO: 4;
- (c) a polynucleotide encoding a polypeptide comprising amino acid 1 to 74 of SEQ ID NO: 6;
- (d) a polynucleotide which is complementary to the polynucleotide of (a), (b), or (c); and
- (e) a polynucleotide comprising at least 15 consecutive bases of the polynucleotide of (a), (b), (c), or (d).

2-14. (Cancelled)

15. (Original): A polypeptide comprising a member selected from the group consisting of:

- (a) a polypeptide comprising amino acid 1 to 69 of SEQ ID NO:2;
- (b) a polypeptide comprising amino acid 1 to 69 of SEQ ID NO:4;
- (c) a polypeptide comprising amino acid 1 to 74 of SEQ ID NO:6;
- (d) a polypeptide which is at least 95% identical to the polypeptide of (a), (b) or (c).

16-18. (Cancelled)

19. (Original): A compound which inhibits activation of the polypeptide of claim 15.

20. (Original): An antibody against a polypeptide of claim 15.

21-25. (Cancelled)

26. (Original): A method for the treatment of a patient having need of hESF I, II, or III comprising: administering to the patient a therapeutically effective amount of the polypeptide of claim 15.

27-28. (Cancelled)

29. (Original): A process for diagnosing a disease or a susceptibility to a disease related to an under-expression of the polypeptide of claim 15 comprising:
determining a mutation in a nucleic acid sequence encoding said polypeptide.

30. (Original): A diagnostic process comprising: analyzing for the presence of the polypeptide of claim 15 in a sample derived from a host.

31-34. (Cancelled)

β^2
35. (New): An isolated antibody or portion thereof that specifically binds to a protein selected from the group consisting of:

(a) a protein whose sequence consists of amino acid residues -21 to 69 of SEQ ID NO: 4;

(b) a protein whose sequence consists of amino acid residues 1 to 69 of SEQ ID NO: 4;

(c) a protein whose sequence consists of an antigenic fragment of the amino acid sequence of SEQ ID NO: 4;

(d) a protein consisting of a fragment of SEQ ID NO: 4, wherein said fragment comprises at least 30 contiguous amino acid residues of SEQ ID NO: 4; and

(e) a protein consisting of a fragment of SEQ ID NO: 4, wherein said fragment comprises at least 50 contiguous amino acid residues of SEQ ID NO: 4.

36. (New): The antibody or portion thereof of claim 35 that specifically binds protein (a).

37. (New): The antibody or portion thereof of claim 35 that specifically binds protein (b).

38. (New): The antibody or portion thereof of claim 35 that specifically binds protein (c).

39. (New): The antibody or portion thereof of claim 35 that specifically binds protein (d).

40. (New): The antibody or portion thereof of claim 35 that specifically binds protein (e).

41. (New): The antibody or portion thereof of claim 35 wherein said protein specifically bound by said antibody or portion thereof is glycosylated.

B²
42. (New): The antibody or portion thereof of claim 35 which is a monoclonal antibody.

43. (New): The antibody or portion thereof of claim 35 which is a polyclonal antibody.

44. (New): The antibody or portion thereof of claim 35 which is a chimeric antibody.

45. (New): The antibody or portion thereof of claim 35 which is a humanized antibody.

46. (New): The antibody or portion thereof of claim 35 which is a human antibody.

47. (New): The antibody or portion thereof of claim 35 which is a single chain antibody.

48. (New): The antibody or portion thereof of claim 35 which is a Fab fragment.

49. (New): A composition comprising the antibody or portion thereof of claim 35 and a carrier.

50. (New): The composition of claim 49, wherein the antibody or portion thereof is a monoclonal antibody.

51. (New): The composition of claim 49, wherein the antibody or portion thereof is a chimeric antibody.

B²
52. (New): The composition of claim 49, wherein the antibody or portion thereof is a humanized antibody.

53. (New): The composition of claim 49, wherein the antibody or portion thereof is a human antibody.

54. (New): The composition of claim 49, wherein the antibody or portion thereof is a single chain antibody.

55. (New): The composition of claim 49, wherein the antibody or portion thereof is a Fab fragment.

56. (New): An isolated cell that produces the antibody of claim 35.

57. (New): A hybridoma that produces the antibody of claim 35.

58. (New): A hybridoma that produces the antibody of claim 42.

59. (New): A method of detecting hESF II protein in a biological sample comprising:

(a) contacting the biological sample with the antibody or portion thereof of claim 35; and

(b) detecting the hESF II protein in the biological sample by its binding to the antibody or portion thereof.

60. (New): The method of claim 59 wherein the antibody is a monoclonal antibody.

61. (New): The method of claim 59 wherein the antibody is a polyclonal antibody.

62. (New): The method of claim 59 wherein the antibody is a chimeric antibody.

63. (New): The method of claim 59 wherein the antibody is a humanized antibody.

64. (New): The method of claim 59 wherein the antibody is a human antibody.

65. (New): The method of claim 59 wherein the antibody is a single chain antibody.

66. (New): An isolated antibody or portion thereof produced by immunizing an animal with a protein selected from the group consisting of:

(a) a protein whose sequence comprises amino acid residues -21 to 69 of SEQ ID NO: 4;

(b) a protein whose sequence comprises amino acid residues 1 to 69 of SEQ ID NO: 4;

(c) a protein whose sequence comprises an antigenic fragment of the amino acid sequence of SEQ ID NO: 4;

(d) a protein whose sequence comprises at least 30 contiguous amino acid residues of SEQ ID NO: 4; and

(e) a protein whose sequence comprises at least 50 contiguous amino acid residues of SEQ ID NO: 4,

wherein said antibody or portion thereof specifically binds to the amino acid sequence of SEQ ID NO: 4.

67. (New): The antibody or portion thereof of claim 66 produced by immunizing an animal with protein (a).

68. (New): The antibody or portion thereof of claim 66 produced by immunizing an animal with protein (b).

69. (New): The antibody or portion thereof of claim 66 produced by immunizing an animal with protein (c).

70. (New): The antibody or portion thereof of claim 66 produced by immunizing an animal with protein (d).

71. (New): The antibody or portion thereof of claim 66 produced by immunizing an animal with protein (e).

72. (New): The antibody or portion thereof of claim 66 wherein said antibody is monoclonal.

73. (New): The antibody or portion thereof of claim 37 wherein said protein specifically bound by said antibody or portion thereof is glycosylated.

74. (New): The antibody or portion thereof of claim 37 which is a monoclonal antibody.

75. (New): The antibody or portion thereof of claim 37 which is a polyclonal antibody.

76. (New): The antibody or portion thereof of claim 37 which is a chimeric antibody.

77. (New): The antibody or portion thereof of claim 37 which is a humanized antibody.

78. (New): The antibody or portion thereof of claim 37 which is a human antibody.

79. (New): The antibody or portion thereof of claim 37 which is a single chain antibody.

80. (New): The antibody or portion thereof of claim 37 which is a Fab fragment.

81. (New): A composition comprising the antibody or portion thereof of claim 37 and a carrier.

82. (New): The composition of claim 81, wherein the antibody or portion thereof is a monoclonal antibody.

83. (New): The composition of claim 81, wherein the antibody or portion thereof is a chimeric antibody.

84. (New): The composition of claim 81, wherein the antibody or portion thereof is a humanized antibody.

85. (New): The composition of claim 81, wherein the antibody or portion thereof is a human antibody.

86. (New): The composition of claim 81, wherein the antibody or portion thereof is a single chain antibody.

87. (New): The composition of claim 81, wherein the antibody or portion thereof is a Fab fragment.

88. (New): An isolated cell that produces the antibody of claim 37.

89. (New): A hybridoma that produces the antibody of claim 37.

90. (New): A hybridoma that produces the antibody of claim 74.

91. (New): A method of detecting hESF II protein in a biological sample comprising:

(a) contacting the biological sample with the antibody or portion thereof of claim 37; and

(b) detecting the hESF II protein in the biological sample by its binding to the antibody or portion thereof.

92. (New): The method of claim 91 wherein the antibody is a monoclonal antibody.

93. (New): The method of claim 91 wherein the antibody is a polyclonal antibody.

94. (New): The method of claim 91 wherein the antibody is a chimeric antibody.

95. (New): The method of claim 91 wherein the antibody is a humanized antibody.

96. (New): The method of claim 91 wherein the antibody is a human antibody.

97. (New): The method of claim 91 wherein the antibody is a single chain antibody.

98. (New): The method of claim 91 wherein the antibody or portion thereof is a Fab fragment.

B²
99. (New): An isolated antibody or portion thereof that specifically binds to a protein selected from the group consisting of:

(a) a protein whose sequence consists of the amino acid sequence of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;

(b) a protein whose sequence consists of the amino acid sequence of the mature polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;

(c) a protein whose sequence consists of an antigenic fragment of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;

(d) a protein consisting of a fragment of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402, wherein said fragment comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402; and

(e) a protein consisting of a fragment of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402, wherein said fragment comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402.

100. (New): The antibody or portion thereof of claim 99 that specifically binds protein (a).

101. (New): The antibody or portion thereof of claim 99 that specifically binds protein (b).

102. (New): The antibody or portion thereof of claim 99 that specifically binds protein (c).

103. (New): The antibody or portion thereof of claim 99 that specifically binds protein (d).

104. (New): The antibody or portion thereof of claim 99 that specifically binds protein (e).

B²
105. (New): The antibody or portion thereof of claim 99 wherein said protein specifically bound by said antibody or portion thereof is glycosylated.

106. (New): The antibody or portion thereof of claim 99 which is a monoclonal antibody.

107. (New): The antibody or portion thereof of claim 99 which is a polyclonal antibody.

108. (New): The antibody or portion thereof of claim 99 which is a chimeric antibody.

109. (New): The antibody or portion thereof of claim 99 which is a humanized antibody.

110. (New): The antibody or portion thereof of claim 99 which is a human antibody.

111. (New): The antibody or portion thereof of claim 99 which is a single chain antibody.

112. (New): The antibody or portion thereof of claim 99 which is a Fab fragment.

113. (New): A composition comprising the antibody or portion thereof of claim 99 and a carrier.

114. (New): The composition of claim 113, wherein the antibody or portion thereof is a monoclonal antibody.

115. (New): The composition of claim 113, wherein the antibody or portion thereof is a chimeric antibody.

B²
116. (New): The composition of claim 113, wherein the antibody or portion thereof is a humanized antibody.

117. (New): The composition of claim 113, wherein the antibody or portion thereof is a human antibody.

118. (New): The composition of claim 113, wherein the antibody or portion thereof is a single chain antibody.

119. (New): The composition of claim 113, wherein the antibody or portion thereof is a Fab fragment.

120. (New): An isolated cell that produces the antibody of claim 99.

121. (New): A hybridoma that produces the antibody of claim 99.

122. (New): A hybridoma that produces the antibody of claim 106.

123. (New): A method of detecting hESF II protein in a biological sample comprising:

(a) contacting the biological sample with the antibody or portion thereof of claim 99; and

(b) detecting the hESF II protein in the biological sample by its binding to the antibody or portion thereof.

124. (New): The method of claim 123 wherein the antibody is a monoclonal antibody.

B²
125. (New): The method of claim 123 wherein the antibody is a polyclonal antibody.

126. (New): The method of claim 123 wherein the antibody is a chimeric antibody.

127. (New): The method of claim 123 wherein the antibody is a humanized antibody.

128. (New): The method of claim 123 wherein the antibody is a human antibody.

129. (New): The method of claim 123 wherein the antibody is a single chain antibody.

130. (New): An isolated antibody or portion thereof produced by immunizing an animal with a protein selected from the group consisting of:

- (a) a protein whose sequence comprises the amino acid sequence of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;
- (b) a protein whose sequence comprises the amino acid sequence of the mature polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;
- (c) a protein whose sequence comprises an antigenic fragment of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;
- (d) a protein whose sequence comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402; and,
- (e) a protein whose sequence comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402;

wherein said antibody or portion thereof specifically binds to the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97402.

β²
131. (New): The antibody or portion thereof of claim 130 produced by immunizing an animal with protein (a).

132. (New): The antibody or portion thereof of claim 130 produced by immunizing an animal with protein (b).

133. (New): The antibody or portion thereof of claim 130 produced by immunizing an animal with protein (c).

134. (New): The antibody or portion thereof of claim 130 produced by immunizing an animal with protein (d).

135. (New): The antibody or portion thereof of claim 130 produced by immunizing an animal with protein (e).

136. (New): The antibody or portion thereof of claim 130 wherein said antibody is monoclonal.

137. (New): The antibody or portion thereof of claim 101 wherein said protein specifically bound by said antibody or portion thereof is glycosylated.

138. (New): The antibody or portion thereof of claim 101 which is a monoclonal antibody.

139. (New): The antibody or portion thereof of claim 101 which is a polyclonal antibody.

140. (New): The antibody or portion thereof of claim 101 which is a chimeric antibody.

141. (New): The antibody or portion thereof of claim 101 which is a humanized antibody.

142. (New): The antibody or portion thereof of claim 101 which is a human antibody.

143. (New): The antibody or portion thereof of claim 101 which is a single chain antibody.

144. (New): The antibody or portion thereof of claim 101 which is a Fab fragment.

145. (New): A composition comprising the antibody or portion thereof of claim 101 and a carrier.

146. (New): The composition of claim 145, wherein the antibody or portion thereof is a monoclonal antibody.

147. (New): The composition of claim 145, wherein the antibody or portion thereof is a chimeric antibody.

148. (New): The composition of claim 145, wherein the antibody or portion thereof is a humanized antibody.

149. (New): The composition of claim 145, wherein the antibody or portion thereof is a human antibody.

150. (New): The composition of claim 145, wherein the antibody or portion thereof is a single chain antibody.

B²
151. (New): The composition of claim 145, wherein the antibody or portion thereof is a Fab fragment.

152. (New): An isolated cell that produces the antibody of claim 101.

153. (New): A hybridoma that produces the antibody of claim 101.

154. (New): A hybridoma that produces the antibody of claim 138.

155. (New): A method of detecting hESF II protein in a biological sample comprising:

(a) contacting the biological sample with the antibody or portion thereof of claim 101; and

(b) detecting the hESF II protein in the biological sample by its binding to the antibody or portion thereof.

156. (New): The method of claim 155 wherein the antibody is a monoclonal antibody.

157. (New): The method of claim 155 wherein the antibody is a polyclonal antibody.

158. (New): The method of claim 155 wherein the antibody is a chimeric antibody.

159. (New): The method of claim 155 wherein the antibody is a humanized antibody.

160. (New): The method of claim 155 wherein the antibody is a human antibody.

161. (New): The method of claim 155 wherein the antibody is a single chain antibody.
